



FLORENCE COPPER INC.

1575 W. Hunt Highway, Florence, Arizona 85132 USA

florencecopper.com

October 11, 2021

Arizona Department of Environmental Quality
Groundwater Protection Value Stream
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007

ATTN: Maribeth Greenslade

Subject: Florence Copper BHP Copper Evaporation Pond
One-Time Sampling Event
Aquifer Protection Permit No. 101704, LTF 88973

Dear Ms. Greenslade:

In accordance with APP No. 101704, Section 2.5.1 and Section 4.2, Tables 7 and 9, Florence Copper is submitting this report for the one-time sampling event of the BHP Copper Evaporation Pond (BHP Pond). Solution flow into the BHP Pond began on July 8, 2021. Within 90 days of discharge to the BHP Pond, a grab sample for parameters listed in Section 4.2, Table 9, was collected on September 15, 2021. Turner Laboratories in Tucson, AZ performed the water quality analyses, except for total petroleum hydrocarbon (TPH) analyses which were conducted by Eurofins Test America, and radiochemistry analyses which were conducted by Radiation Safety Engineering, Inc.

Laboratory results were received on October 1, 2021. Table 1 lists all the analytes and results. Non-detect values are recorded as less than the laboratory practical quantitation limit for that specific analyte.

Please feel free to contact me at 520-374-3984 if you have any questions or require additional information.

Sincerely,

Florence Copper, Inc.

A handwritten signature in black ink, appearing to read "Brent Berg".

For BRENT BERG

Brent Berg
General Manager

Cc: Nancy Rumrill, United States EPA

Table 1. BHP Pond Water Quality Sample Laboratory Results

BHP Pond Monitoring Parameters	9/15/2021 Sample Results	Units
pH - Field	6.00	
pH (pH Units), Lab	6.3	-
Specific Conductance - field	11,038	µmhos/cm
Conductivity, Lab	22,000	µmhos/cm
Total Dissolved Solids (Residue, Filterable)	10,000	mg/L
Alkalinity, Total (as CaCO ₃)	52	mg/L
Alkalinity, Carbonate (as CaCO ₃)	<2	mg/L
Alkalinity, Bicarbonate (as CaCO ₃)	52	mg/L
Nitrogen, Nitrate (as N) ¹	<50	mg/L
Sulfate	5400	mg/L
Chloride	1000	mg/L
Fluoride ¹	<50	mg/L
Calcium	730	mg/L
Nitrogen, Ammonia (as N)	<0.50	mg/L
Magnesium	640	mg/L
Potassium	130	mg/L
Sodium	1300	mg/L
Iron	<0.30	mg/L
Aluminum	<2	mg/L
Antimony	<0.20	mg/L
Arsenic	<0.040	mg/L
Barium	0.087	mg/L
Beryllium	0.011	mg/L
Cadmium	0.044	mg/L
Chromium	<0.030	mg/L
Cobalt	0.22	mg/L
Copper	4.7	mg/L
Lead	<0.040	mg/L
Manganese	6.4	mg/L
Mercury	<0.0010	mg/L
Nickel	0.088	mg/L
Selenium	0.15	mg/L
Thallium	<0.050	mg/L
Uranium	0.015	mg/L
Zinc	0.18	mg/L
Gross Alpha ²	16.7 ± 2.2	pCi/L
Adjusted Gross Alpha ²	7.8 ± 3.0	pCi/L
Radium 226 + Radium 228	8.9 ± 0.5	pCi/L

BHP Pond Monitoring Parameters	9/15/2021 Sample Results	Units
Uranium Isotopes ³	8.9 ± 2.1	pCi/L
TPH Diesel	<0.096	mg/L
Benzene	<0.50	ug/L
Toluene	<0.50	ug/L
Ethylbenzene	<0.50	ug/L
Xylenes, Total	<1.5	ug/L

¹ Sample required dilution due to matrix.

² Adjusted gross alpha is calculated if gross alpha is greater than 12 picocuries per liter, otherwise gross alpha is used. The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Total Uranium Isotopes).

³ Total Uranium Isotope activity results must be used for calculating Adjusted Gross Alpha.